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Closing the gap . . . between the university and schoolhouse

Research crosses into practice when scholars know how to make their work visible to teachers, friendly to their worldview, practical for use by K-12 schools, and easy to share. But that doesn't mean the research is good or effective.

By Jack Schneider



It is common knowledge in education that no link exists between the parallel worlds of research and practice. This fact is often lamented, and scholars and classroom teachers are equally blamed for the situation.

Yet talk with enough K-12 educators and it soon becomes clear that however imperfect the relationship some connection does exist. Because while most education research never moves beyond small-circulation journals and niche academic presses, a handful of ideas have made the long leap from the ivory tower to the schoolhouse.

Of course, not all teachers are familiar with the same pieces of research. Given the lack of uniformity across university-run teacher preparation programs, state-controlled licensure requirements, and district-managed professional development, variance is the rule. Nevertheless, teachers do recognize ideas from research, and there are clear patterns in what they know.

Teachers, for instance, tend to be familiar with ideas like Howard Gardner's theory of multiple intelligences and Carol Tomlinson's differentiated instruction. They recognize and often comfortably employ tools like Bloom's taxonomy, project-based learning, and the Socratic seminar. And though they may not always endorse them, teachers are often well-acquainted with curricular programs like Direct Instruction and Success for All.

So if there is truly no connection between research and practice, how can we explain these exceptions?

One hopeful explanation is that cream rises to the top. In such an ideal scenario, scholarly ideas familiar to classroom teachers would represent the strongest and most relevant work of education researchers. Such ideas would have entered practice not only because of their greater inherent value but also as a result of rational and active deliberation.

If only that were the case.

How research moves

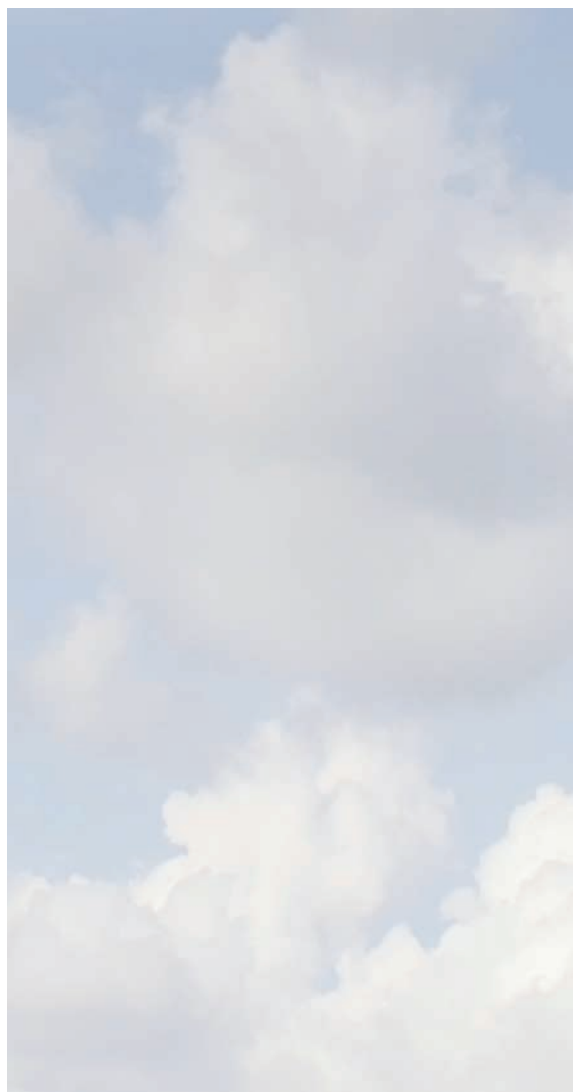
Some professional fields have excellent systems for moving research into practice. Aerospace companies, for instance, hire scholars whose research advances a particular agenda, and those building airplanes adhere closely to guidelines informed by research. Education, however, is different. In part, this is because the aims of schooling are incredibly broad and complex, making educational "success" a less straightforward outcome than the production of

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a working jet engine. But it is also the product of historical happenstance, which divided involved parties from each other and endowed each with a separate set of professional powers and responsibilities.

Because of factors like local control and the tremendous scale of universal K-12 schooling, American teachers won command of the instructional core



Deepen your understanding of this article with questions and activities in this month's *Kappan* Professional Development Discussion Guide by Lois Brown Easton. Download a PDF of the guide at kappanmagazine.org.

For education research to gain traction in practice, teachers must view it as reasonable and appropriate for classroom use.

without ever gaining jurisdiction over scholarship or policy. Conversely, policy makers became well-positioned to interpret scholarship and issue general directives but failed to secure real control over classroom teaching. And academics, in part as a product of their own status climbing, were eventually relegated to seeming irrelevance in the ivory tower — raising their scholarly profiles by detaching themselves completely from K-12 classrooms (Lagemann, 1990). The result of all this is an environment highly inhospitable for moving scholarship into classrooms. And yet ideas do migrate from the ivory tower into the schoolhouse. How is that?

Organisms adapt to hostile environments through genetic mutation. Through chance and accident, they develop characteristics that better suit them to their new circumstances. As a result, they prosper.

Such is the case with education research, where penetration into the world of practice is determined less by scholarly merit than by a particular set of adaptive traits. Like the anteater, which survived droughts and food shortages because of its otherwise impractical snout, some ideas are better suited than others to withstand the rigors of an inhospitable environment.

I analyzed four historical cases of boundary-crossing scholarship — Bloom's taxonomy, Howard Gardner's theory of multiple intelligences, the project method, and Direct Instruction — to determine what enabled these ideas to enter the common knowledge base of working teachers. Each case was different, possessing unique features and idiosyncrasies. Yet common to all was a set of four characteristics that proved crucial in winning a foothold among K-12 teachers.

The first of these characteristics is what might be termed *perceived significance*. Scholarly ideas have to stand out to teachers as relevant and valuable. But absent a connective pipeline, writing a peer-reviewed journal article is not enough to do the trick. After all, teachers lack the time and the training to read and evaluate reams of research. Consequently, ideas that stand out to teachers often do so not because they *are* significant, but rather because they *seem* significant — due to a scholar's institutional affiliation, publication in a practitioner-friendly venue, prevalence in

professional development seminars, or some other signal of value.

The second characteristic is *philosophical compatibility*. For education research to gain traction in practice, teachers must view it as reasonable and appropriate for classroom use. But few scholarly ideas on their own send the right signals. Instead, research most often reads like the work of outsiders and particularly so when it clashes with teacher values and commitments. Yet some ideas ring true, perhaps on account of an implicit message in the scholarship or the intentional messaging of its author. Those ideas, whatever their other merits, have a greater likelihood of gaining a foothold among teachers.

The third crucial characteristic is *occupational realism*. Without more time and flexibility for educators to develop new teaching techniques or reimagine curricula, ideas must be easy to put into immediate use if they are to enter K-12 practice. Scholars rarely consider this. Ideas that have reached classrooms often have done so because savvy PD providers created applications that require neither extensive training nor the overhaul of existing practices — for example, a curricular add-on, a method of lesson planning, or a new approach to asking questions.

The fourth and final characteristic is what might be called *transportability*. Because few systems link educators to scholarship, or even link educators to each other, most research ideas never travel beyond a single diligent teacher or a small group with shared interests. Some ideas, however, are highly transportable — because they have simple cores, or have been explained in accessible language, or are easily translated into lasting structures like curriculum frameworks. When that is the case, research can travel through preservice coursework, professional development seminars, and peer networks. Even if it does not represent better scholarship, it is easier to describe to busy colleagues.

An idea that possesses these four characteristics has a chance of moving beyond the ivory tower to life in classrooms. Of course, there is no guarantee that it will do so. As with any complex process, chance and luck play a significant role. Still, these traits do compensate for weak linkages between scholars and practitioners, making it possible for research to enter K-12 classrooms.

Case in point: Multiple intelligences

Howard Gardner's theory of multiple intelligences (MI) has been a blockbuster in American education — what one set of backers called “contemporary education's most popular idea” (Kornhaber, Fierros, & Veenema, 2004, p. xiv). And the theory has taken hold in schools large and small, public and private, across disciplines, and at all grade levels.

Yet MI's traction in practice should not be taken as evidence that the idea is *right*.

In fact — and to the surprise of many K-12 teachers — research psychologists and cognitive scientists have been highly critical of Gardner's theory. As University of Virginia professor Dan Willingham put it, Gardner's claim to have described multiple, independent kinds of intelligence simply "is not true" (Willingham, 2004, p. 22).

An even wider array of scholars has criticized applications of the theory. Teaching students history through dance — to name just one common practice — is hardly an effective form of instruction. As one critic put it, "random muscular movements have nothing to do with the cultivation of the mind" (Gardner, 1995). And as he wrote elsewhere: "I would certainly not want to be in a school where a lot of time was spent doing these things" (Traub, 1998, p. 22). The critic, it is worth mentioning, was Howard Gardner.

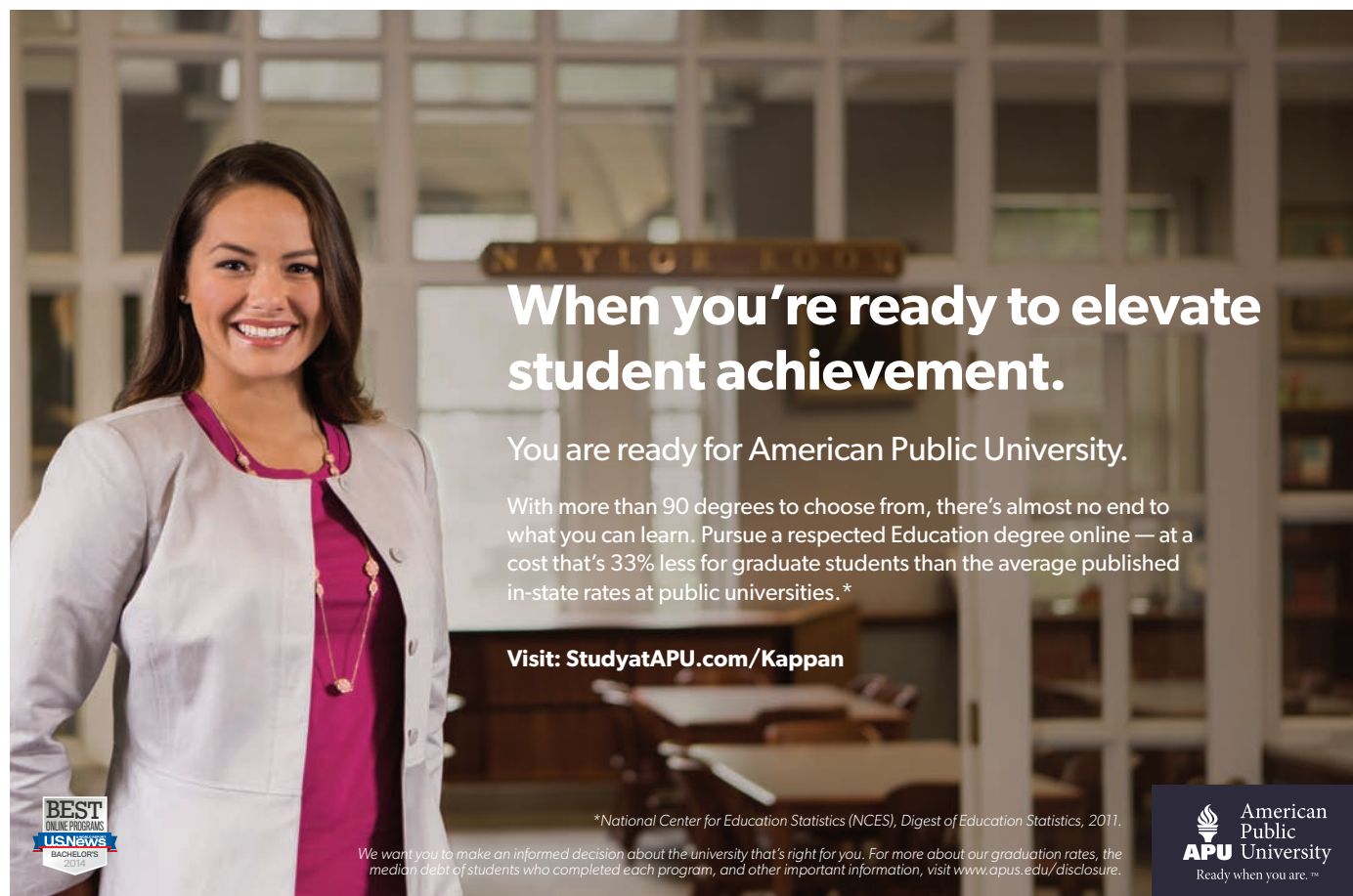
If the theory of multiple intelligences is a questionable one and if the applications are unsettling to Gardner himself, then what explains the traction that MI has won in practice?

First, MI theory was perceived as significant. Regardless of what psychologists and cognitive scien-

tists think of the idea, Gardner is a tenured Harvard professor and MacArthur "genius." Unlike most scholars who publish with obscure academic presses, Gardner's work can be found on the shelves at Barnes & Noble. And whether alone or with coauthors, Gardner publishes frequently in venues read by practitioners.

MI theory was also philosophically compatible. It supported the idea of learning by doing. It buttressed the cherished belief that all children can learn. And perhaps most important, it called into question the adequacy of narrow academic standards and high-stakes accountability tests. Gardner has argued that "MI theory challenges the viability of standardized, machine-scored, multiple-choice assessments" (Blythe & Gardner, 1990, p. 34). In short, Gardner's work on MI reads less like the product of the ivory tower and more like the product of a K-12 insider.

But no degree of perceived significance or philosophical compatibility would have won MI a foothold in classrooms had the idea not also been occupationally realist. And though Gardner was savvy in promoting the idea, he did not particularly concern himself with this matter. In fact, he expressed anxiety about designing classroom applications of MI. Yet third-party professional development providers had



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Gardner's work on multiple intelligences reads less like the product of the ivory tower and more like the product of a K-12 insider.



no such reservations. Seeing an easy way of layering MI onto existing classroom practice and working in an unregulated marketplace, enterprising third parties sold MI as aggressively as possible as a panacea for classroom teaching. Such practices, even if they were not particularly true to Gardner's writings, were quite easy to add on to what teachers already were doing in their classrooms.

Finally, a high level of transportability propelled MI's successful transition into K-12 classrooms. To some extent this was a matter of chance. Gardner's list of intelligences just happened to be few enough that one might remember them all, while being large enough to indicate complexity. But other aspects of the idea's transportability — like the language Gardner used to describe MI — were carefully cultivated. As Robert Sternberg wrote in an otherwise critical review of Gardner's book *Frames of Mind*, the work was “beautifully written, well-organized, [and] engaging” (1984, p. 394). MI, in short, was straightforward to understand and easy to describe — a key advantage in a field marked by little centralized authority where most teachers rely on colleagues for professional guidance.

Why are so many K-12 educators familiar with MI theory? Simply put: The idea possessed a set of adaptive traits that compensated for the absence of a research-to-practice pathway. Like other pieces of boundary-crossing scholarship — Bloom's taxonomy, the project method, and Direct Instruction, among them — Gardner's theory possessed characteristics that made it visible to teachers, friendly to their worldview, practicable for realities of K-12 schools, and easily sharable.

On the whole, Gardner's effect on practice was not negative. Though MI is often understood super-

ficially, and though many criticisms of it are valid, MI has played a role in helping teachers reflect as professionals and has provided a common language for discussing aims.

Nevertheless, there are two problems when research enters practice this way. First, scholarship can possess these characteristics without actually being any good or — as in the case of MI theory — without being consistently effective. The second problem, equally thorny, is that most scholarship — however potentially useful — lacks the traits needed to penetrate practice.

Looking forward

The characteristics that facilitate the movement of research into practice, it seems, are relatively independent of actual *quality*. That being the case, doesn't it seem logical for scholars and K-12 educators to finally relinquish all hope of linking the ivory tower with the schoolhouse?

Perhaps not. Building a research-to-practice pipeline is unlikely, but we need not throw up our hands in despair and proclaim no connection between the two worlds. Nor do we need to sit back and do nothing, merely waiting for scholarship to gain those four key characteristics and trickle into practice.

Consider how scholars might cultivate those traits more broadly in education research. Knowing the importance of characteristics like perceived significance and transportability, they might submit their work to publications read by teachers, create new open-access journals, or even leverage the Internet by maintaining blogs, web sites, and even Twitter accounts. But wherever they publish, scholars will need to learn how to write more effectively for teachers — attending to matters like what an idea is called, how it is explained, and the names of its component parts. Scholars might further raise the perceived significance of their research and increase its transportability by establishing research centers focused on particular issues in practice — teaching elementary math, for example, or serving English language learners. Or perhaps most powerfully, they might engage more directly with professional development providers, recognizing their influence as gatekeepers rather than dismissing them as charlatans.

There is also much that scholars can do to cultivate philosophical compatibility and occupational realism in their work. They could forge strategic partnerships with districts — not unlike the University of Chicago's Consortium for Chicago Schools Research. Alternatively, scholars might form research groups with dual purposes — conducting scholarship and producing K-12 materials. Recently the Stanford History Education group translated the research of its members into a school curriculum

“designed to stand alone and supplement what teachers are already doing in their classrooms” (n.d.). Or most radically, scholars might consider serving sabbatical terms as scholars-in-residence at districts, as professor Darryl Yong did during the 2009-10 school year (2012). The possibilities, it seems, are nearly endless.

As for teachers, they might use what we know about how ideas move to become more active and critical consumers of educational research. Knowing the problematic nature of proxies like a scholar’s institutional affiliation and being aware of the sometimes questionable practices of PD providers, teachers should gauge significance in new ways, for example by doing Google Scholar searches to assess an idea’s effect in the scholarly community. Districts might support this work by identifying key teachers who are respected by peers and who see research as helpful. And taking a page from nations like England, where the approach is called the “cascade” model, they might even give such teachers reduced teaching loads, connect them with scholars, or sponsor enrollment in graduate programs.

Teachers might become more attentive to issues of philosophical compatibility by having productive discussions in their preservice programs and once on the job about how they might advance their profession. Supporting such efforts, schools of education might look to exemplary programs at home and abroad for instruction. Teachers in Finland, for instance, are trained to use research and research-derived competencies (Westbury, Hansen, Kansanen, & Björkvist, 2005).


With regard to occupational realism, teachers might foster a more competitive marketplace of ideas by being more active in adapting research into practice. Interested teachers could form groups — organized by school, district, or affinity — that would meet regularly to develop classroom applications of research. They also might cluster together online to form virtual lesson study clubs focused on specific topics like teaching physics or developing socioemotional skills among elementary students.

Finally, teachers might improve the transportability of research. They could maintain blogs on district web sites detailing their use of research and linking it to the work of others. Or, with district support, teachers might collaborate with journalists — as in one U.K. program — to rewrite and summarize relevant journal articles (Levin, 2004, p. 12). Districts could support this work by hiring research coordinators and librarians at the school or district level.

Building consensus

Connecting research and practice is important work, if only because it has the potential to improve

outcomes for students. For too long we have allowed ourselves to believe that connecting research and practice is unrealizable. Too many decisions in K-12 education are informed by instinct and anecdote, and the results of those decisions are often highly problematic.

But there is a less obvious payoff that would have more far-reaching consequences, and that is a common sense of purpose among key stakeholders. It is not impossible to imagine a world in which unions, state and federal offices, schools of education, districts, school administrators, and classroom teachers engage in genuine partnership for the sake of advancing a shared aim. And though such common ground has been elusive, connecting research with practice is a uniquely alluring opportunity. It may not promise quick fixes or easy solutions. But it does promise an agenda for collectively moving forward, armed with knowledge. 

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